

**RCPS Curriculum Pacing Guide
2013-2014
Subject: Energy Power**

Week of:	SOL #	Unit	Bloom's	Objectives
1 Aug 12-16-13	1,2,39,40,47,48,36,41-43	Measuring, Electric motor	Creating Evaluating Analyzing Applying Understanding Remembering	<p>47. Demonstrate positive work ethic.</p> <p>48. Demonstrate integrity.</p> <p>39 Identify and use safe working practices while participating in lab activities.</p> <p>40 Select and use instruments to collect data related to power systems.</p> <p>47 Explain how thermal energy is used in piston and rotary engines.</p> <p>48 Identify the major subsystems of the automobile engine.</p> <p>39 Participate in an organized personnel system to manage class and laboratory activities.</p> <p>41. Troubleshoot and repair a malfunctioning electrical system.</p> <p>42. Adjust and set ignition timing.</p> <p>43 Remove, inspect, reinstall or</p>

				replace, and adjust ignition system components.
2	3,4,35,52,44-46	Windmills, alt fuels, Hydraulics	Creating Evaluating Analyzing Applying Understanding Remembering	3Demonstrate teamwork skills. 4.Demonstrate self-representation skills. 44. Identify components of a fluid system. 45. Maintain a pneumatic system. 46 Maintain a hydraulic system. 35\ Construct a mechanical power system. 52 Describe the roles of the major components of a power train.
3	5,6,30,31,44-46	Hydraulics	Creating Evaluating Analyzing Applying Understanding Remembering	30. Identify the purposes and goals of the student organization. 31. Explain the benefits and responsibilities of membership in the student organization as a student and in professional/civic organizations as an adult.

				<p>5Demonstrate diversity awareness skills.</p> <p>6Demonstrate conflict resolution skills</p> <p>See week 2 for other supporting obj</p>
4	7,8,44-46	pneumatics	<p>Creating</p> <p>Evaluating</p> <p>Analyzing</p> <p>Applying</p> <p>Understanding</p> <p>Remembering</p>	<p>7Demonstrate creativity and resourcefulness.</p> <p>8 Demonstrate effective speaking and listening skills</p> <p>44. Identify components of a fluid system.</p> <p>45Maintain a pneumatic system.</p> <p>46Maintain a hydraulic system.</p>
5	9,10,34	Pneumatics, parachutes	<p>Creating</p> <p>Evaluating</p> <p>Analyzing</p> <p>Applying</p> <p>Understanding</p> <p>Remembering</p>	<p>9.Demonstrate effective reading and writing skills.</p> <p>10.Demonstrate critical-thinking and problem-solving skills.</p> <p>44Identify components of a fluid</p>

				<p>system.</p> <p>45 Maintain a pneumatic system.</p> <p>46 Maintain a hydraulic system.</p> <p>34 Define terms used in power systems.</p>
6	11,12,34	Parachutes, pens	<p>Creating</p> <p>Evaluating</p> <p>Analyzing</p> <p>Applying</p> <p>Understanding</p> <p>Remembering</p>	<p>11 Demonstrate healthy behaviors and safety skills.</p> <p>12 Demonstrate an understanding of workplace organizations, systems, and climates.</p> <p>34 Define terms used in power systems.</p>
7	13,14,34,40	solar	<p>Creating</p> <p>Evaluating</p> <p>Analyzing</p> <p>Applying</p> <p>Understanding</p> <p>Remebering</p>	<p>13. Demonstrate lifelong-learning skills.</p> <p>14. Demonstrate job-acquisition and advancement skills.</p> <p>34 Define terms used in power systems.</p> <p>40 Select and use instruments to collect data related to power</p>

				systems.
8	14, 34,37	Pens, top, solar, electric motor	Creating Evaluating Analyzing Applying Understanding Remebering	14. Demonstrate job-acquisition and advancement skills. 34. Define terms used in power systems. 37 Identify community and technical resources.
9	15,56, 34	Co2 car	Creating Evaluating Analyzing Applying Understanding Remembering	15. Demonstrate time-, task-, and resource-management skills. 34 Define terms used in power systems. 49. 56 Describe the development of power and energy systems throughout the world.
10	16, 35	CO2 car, motors, maglev, styro boats	Creating Evaluating Analyzing Applying Understanding Remembering	16. Mathematics 35 Construct a mechanical power system.

11	17,18, 35 39 40 50,51,52	Boats, mousetrap cars SVO conversion	Creating Evaluating Analyzing Applying Understanding Remembering	<p>17 Demonstrate customer-service skills.</p> <p>18. Demonstrate proficiency with technologies common to a specific occupation.</p> <p>35 Construct a mechanical power system.</p> <p>39 Identify and use safe working practices while participating in lab activities.</p> <p>40 Select and use instruments to collect data related to power systems.</p> <p>50. Maintain and service fuel-system components.</p> <p>51. Maintain and service a cooling system.</p> <p>52 Describe the roles of the major components of a power train.</p>
12	19,20,33,50,51	Moustrap cars, simple machines	Creating	19 Demonstrate information

			Evaluating Analyzing Applying Understanding Remembering	technology skills. 20 Demonstrate an understanding of Internet use and security issues. 33 Identify Internet safety issues and procedures for complying with acceptable use standards. See week 11 for supporting obj
13	21,53,49	Balsa bridge, engine designs	Creating Evaluating Analyzing Applying Understanding Remembering	21 Demonstrate telecommunications skills. 53 Describe the characteristics of petroleum-based products. 49 Compare diesel and gasoline engine operating principles and components.
14	34,35	Balsa Bridge	Creating Evaluating Analyzing Applying Understanding Remembering	35 Construct a mechanical power system. 34 Define terms used in power systems.

15	34,35,36,40	Derby car	Creating Evaluating Analyzing Applying Understanding Remembering	<p>34. Define terms used in power systems.</p> <p>35. Construct a mechanical power system.</p> <p>36. Participate in an organized personnel system to manage class and laboratory activities.</p> <p>37. Identify and use safe working practices while participating in lab activities.</p> <p>40. Select and use instruments to collect data related to power systems.</p>
16	22,38,57	Derby car, trebuchet, presentation	Creating Evaluating Analyzing Applying Understanding Remembering	<p>38 Investigate career opportunities related to energy and power.</p> <p>57 Research the contributions of individuals and groups related to power and energy.</p> <p>22. Examine aspects of planning within an industry/organization.</p>
17	23-26, 22,38,57	Trebuchet/catapult/presentations	Creating Evaluating	See week 16 above

			<p>Analyzing Applying Understanding Remembering</p>	<p>23. Examine aspects of management within an industry/organization.</p> <p>24 Examine aspects of financial responsibility within an industry/organization.</p> <p>25 Examine technical and production skills required of workers within an industry/organization.</p> <p>26 Examine principles of technology that underlie an industry/organization.</p>
18	27-29, 22,38,57	Mag lev, nuclear, presentations	<p>Creating Evaluating Analyzing Applying Understanding Remebering</p>	<p>27 Examine labor issues related to an industry/organization.</p> <p>28 Examine community issues related to an industry/organization.</p> <p>29 Examine health, safety, and environmental issues related to an industry/organization.</p> <p>See week 16 above</p>
